

Sept. 19, 1950

H. H. WEISS

2,522,912

CONVEYER FOR BOTTLE-WASHING MACHINES

Filed May 23, 1947

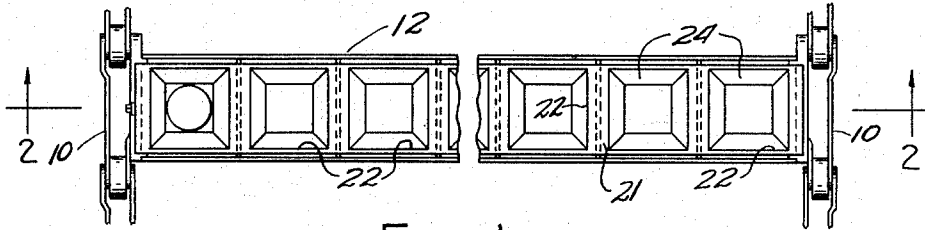


FIG. 1

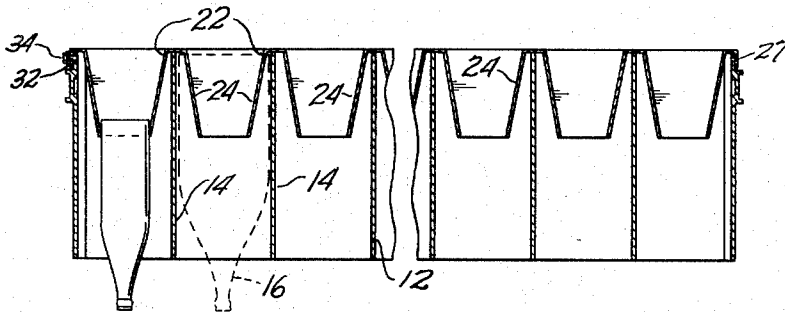


FIG. 2

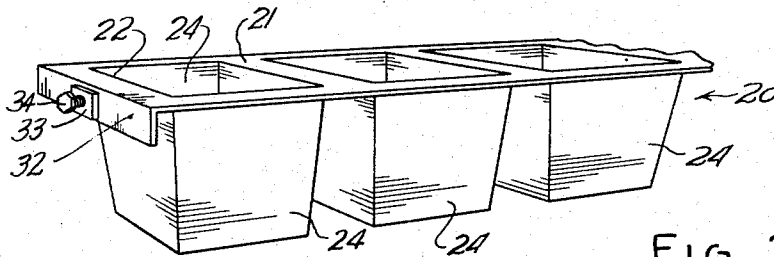


FIG. 3

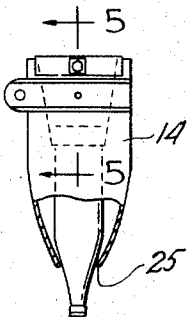


FIG. 4

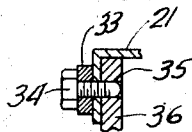


FIG. 5

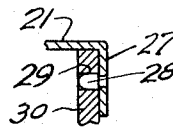


FIG. 6

INVENTOR.

Hans H Weiss

BY

Eugene B. Simpson

ATTORNEY

UNITED STATES PATENT OFFICE

2,522,912

CONVEYER FOR BOTTLE-WASHING
MACHINES

Hans H. Weiss, Seattle, Wash.

Application May 23, 1947, Serial No. 750,003

4 Claims. (Cl. 198—131)

1

This invention relates to bottle washing machines, and more particularly to a pocket adapter to enable a machine to be used for different sizes of bottles.

In a bottle washing machine, it is customary to make the machine to accommodate a single size bottle, for example, a one quart bottle. Such a machine does not ordinarily prove satisfactory when washing a smaller bottle, since the smaller bottles do not stand erect in the pocket, leading to unsatisfactory cleaning, besides, the bottles roll around in the pocket and become marred.

It is an object of the present invention to produce an adapter for bottle washing machine pockets which will enable a larger machine to accommodate a smaller bottle and thoroly cleanse it.

Another object is to provide a pocket adapter for bottle washing machines which may be attached or detached to the bottle washer at will.

A further object is to reduce the cost of bottle washing machinery required to wash a variety of sizes of bottles.

A further object is to provide a pocket adapter for use on bottle washers which will be simple and economical of manufacture.

A still further object is to provide a pocket adapter for bottle washers which will be simple to apply.

A still further object is to provide a pocket adapter which will hold a smaller bottle aligned in the pocket.

Still further objects will become apparent upon considering the following specification, which, when taken in conjunction with the accompanying drawings, illustrates a preferred form of the invention.

In the drawings:

Figure 1 is a plan view of a carrier having a multiplicity of pockets, with the pocket adapter in place therein;

Figure 2 is a cross section taken on the line 2—2 of Figure 1, looking in the direction of the arrows, showing a smaller bottle in place in the adapter and a normal sized bottle in dotted lines;

Figure 3 is a perspective view of the pocket adapter per se;

Figure 4 is an end view of the carrier showing the pocket adapter in place in the carrier pocket to retain the base of a bottle;

Figure 5 is a cross section taken thru one end of the carrier on the line 5—5 of Figure 4; and

Figure 6 is a similar cross section taken thru

2

the opposite end of the carrier on the line 5—5 of Figure 4.

Referring to the drawings, the bottle washing machine has a conveyor comprising a pair of parallel chains 10—10, the inside links of which carry a plurality of carriers 12, one of which is shown in the drawings. The carriers 12 contain a plurality of pockets 14 spaced across the carrier, each of which normally is designed to accommodate a bottle 16 (Figure 2), of substantially the size of a pocket.

When it is desired to wash a smaller bottle, a pocket adapter 20, which is shown in detail in Figure 3, is affixed to the carrier.

The pocket adapter comprises a base plate 21 having a series of apertures 22 therein. The apertures receive pyramidal pockets 24 which are secured at their upper or wider ends to the apertures 22 and taper inwardly and downwardly until the width of the opening is substantially the diameter of the bottle. The depth of the pyramidal pockets is such that when the smaller bottle is received in the pocket 12 with the neck projecting from the throat 25 (Figure 4), the small opening of the pyramid will retain and center the base of the bottle.

The plate 22 is bent over at one end, as shown at 27, and has a pin 28 (Figure 6), receivable in an aperture 29 in the end wall 30 of the carrier 12.

The opposite end of the plate 21 has a turned-down end 32 which has welded thereto a reinforcing plate 33. A screw 34 passes through a threaded aperture in the plate 33 and thru the turned-down end 32 of the plate 21 to engage an aperture 35 in the end wall 36 of the carrier 12. If desired, a spring action catch, or other suitable fastening means, may be substituted for the screw 34.

The adapter may be made in any width, that is, the end two, three, or four pockets may be fitted with an adapter and the remainder of the pockets in any width left free to accommodate full-sized bottles, or the adapter may be made to convert the entire machine for use with smaller bottles.

Operation

In operation, when it is desired to run small bottles through the machine, the adapters are placed in position in the carriers with the pin 28 engaged in the hole 29, and the screw 34 engaged in the hole 35. The entire machine, or such part as may be desired to be used, is equipped with the pocket adapters. Smaller bottles than nor-

3

mal may then be placed in those carriers so equipped, the adapters holding the base of the bottle, while the apertures 25 in the normal pocket retain the necks of the bottles. Bottles are thus accurately centered in the pocket and will receive the bottle brushes, and will not rattle in the carrier and deform the bottle.

It will be realized that the hereinbefore described form of the invention is to be taken merely as a preferred embodiment thereof, and that various changes in size, shape and arrangement of parts may be made without departing from the spirit of the invention and of the subjoined claims.

That which is claimed as new and is desired to be secured by United States Letters Patent is:

1. In a bottle washing machine of the character described including a pair of spaced carrier chains, a plurality of bottle carriers supported between said chains, each carrier having a plurality of pockets adapted to receive and transport bottles through the machine, a pocket adapter fitting into one of said pockets, said adapter tapering inwardly and downwardly in the pocket to receive and center the base of a bottle of smaller diameter than the diameter of the pocket, and means to retain said adapter in said pocket.

2. In a bottle washing machine of the character described including a pair of spaced carrier chains, a plurality of bottle carriers supported between said chains, each carrier having a plurality of pockets adapted to receive and transport bottles through the machine, a pocket adapter comprising a pyramidal member fitting into one of said pockets, said adapter tapering inwardly and downwardly in the pocket to receive and

4

center the base of a bottle of smaller diameter than the diameter of the pocket, and means to retain said adapter in said pocket.

3. In a bottle washing machine of the character described including a pair of spaced carrier chains, a plurality of bottle carriers supported by said chains, each carrier having a plurality of pockets adapted to receive and transport bottles through the machine, a pocket adapter comprising a pyramidal member fitting into one of said pockets and tapering inwardly and downwardly therein to receive and center the base of a bottle of smaller diameter than the diameter of the pocket, and means including a screw engageable with the carrier to retain the adapter in the pocket.

4. In a bottle washing machine of the character described including a pair of spaced carrier chains, a plurality of bottle carriers supported between said chains, each carrier comprising a plurality of pockets, a pocket adapter fitting into one of said bottle pockets and tapering inwardly and downwardly therein to receive and center the base of a bottle of smaller diameter than the diameter of the pocket, and means including a screw engageable with the carrier to retain said adapter in said pocket.

HANS H. WEISS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
984,069	Broecker	Feb. 14, 1911
1,756,554	Hippenmeyer	Apr. 29, 1930